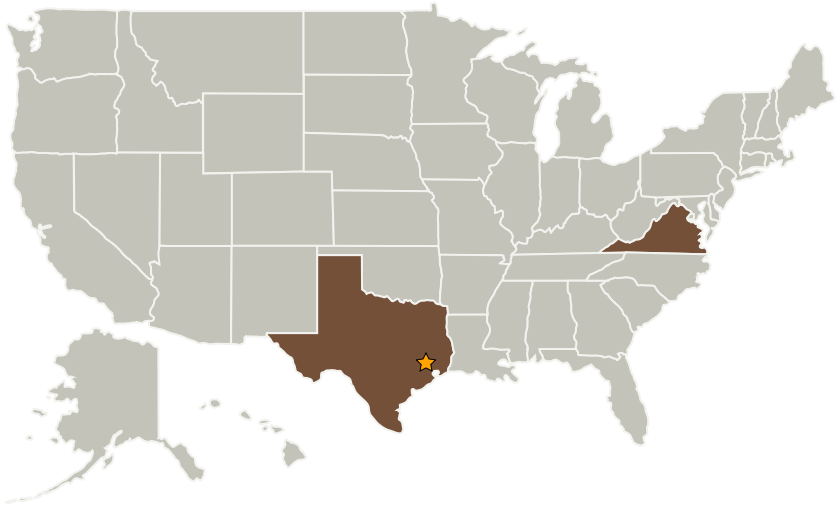
Reconfigurable, Digital EVA Radio, Phase I

Completed Technology Project (2006 - 2006)

Project Introduction

AeroAstro proposes to develop a low-power, low-volume and lightweight, state-of-the-art digital radio capable of operating in a wide variety of bands, from VHF through Ka microwave, with data transceive capabilities of voice, telemetry, and high-resolution video. This device is intended for use in manned extra-vehicular activities (EVAs) in deep-space environments, on lunar and planetary surfaces, and in the links and networks involved in end-to-end data flow. This radio is innovative in several aspects: in its size and power, in its modularity that allows the ability to handle different bands, in its use of software radio technologies, in its automatic adaptability to varying transmission environments, and in its reliability and fault-tolerant performance. This technology is paramount to the safety and success of manned missions in space, where unpredictable environments are present and where reliability is absolutely critical.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
AeroAstro Corporation	Supporting Organization	Industry	Ashburn, Virginia

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Texas	Virginia

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  - TX12.2 Structures
    - TX12.2.3 Reliability and Sustainment